TreeSet and TreeMap

- The Set and Map interfaces are implemented by
  - `HashSet` and `HashMap` (using hash tables, O(1))
  - `TreeSet` and `TreeMap` (using Red-Black trees, O(log *n*))
- TreeSet and TreeMap are *sorted*
  - Implement child interfaces `SortedSet` and `SortedMap`
  - An iteration over all keys proceeds in ascending order
  - Can retrieve smallest (`first()`) or largest (`last()`) element

TreeSet and TreeMap (2)

- Order of keys in TreeSet and TreeMap
  - Keys `K` must either implement `Comparable<K>` or
  - An explicit `Comparator<K>` must be supplied in the constructor of `TreeSet` / `TreeMap`

```
TreeSet<Person> tree = new TreeSet<Person>();
tree.add(new Person("Janet", "Doe"));
tree.add(new Person("Jane", "Wilkinson"));
tree.add(new Person("Adam", "Smith"));
tree.add(new Person("Adam", "Smithson"));
System.out.println(tree);
```